

<u>No.</u>	<u>General Comment</u>
1	Review of the May 2013 RM 10.9 Removal Action Perimeter Air and Noise Monitoring Plan, LPRSA, has been completed. This plan was prepared by CH2MHill on behalf of the Cooperating Parties Group (CPG), the entity implementing the RM 10.9 Time Critical Removal Action (TCRA). NJDEP comments are provided below:

<u>No.</u>	<u>Worksheet No./ Page No.</u>	<u>Specific Comments</u>
1		<p>Although the opening paragraph of Section 3 states that COPCs emission through both particulate and vapor form will be monitored, this is not evident in other sections of the report. It is noted however, that the selected sampling and analytical methods accommodate both.</p> <p><b>Response: The only vapor form of monitoring will be the real-time monitoring for VOCs and hydrogen sulfide. And these will be monitored only as a precaution since the PtE calculations previously provided to NJDEP indicate that emissions associated with these parameters will be several orders of magnitude below the NJDEP permitting thresholds.</b></p>
2		<p>The report often refers to the Potential to Emit (PtE) calculations that were performed per request by the NJDEP Air Permitting unit. This information should be provided as an attachment for easier reference for this stand-alone plan.</p> <p><b>Response: The PtE calculations and submittals to NJDEP will be added as an appendix to the PAMP and are included as part of this Response to Comments submittal.</b></p>
3	Section 3.1, Air Monitoring Locations	<p>Although Newark Airport data are useful for regional prevailing wind direction, it should be noted that the on-site weather station (Section 3.2.5) will supplement and guide the actual placement of daily monitoring locations. This is important to address site-specific influences to wind direction due to RM 10.9 TCRA features, such as an open waterway, sharp bend in the river and riverbank landscape features (elevation changes, buildings, highway, etc.).</p> <p><b>Response: Agreed. The on-site weather station will be the primary source of current conditions. The Newark data were used to identify the historic prevailing wind directions.</b></p>
4	Section 3.1.1, Upwind-Background Locations	<p>CPG currently proposes one upwind location, UW#1, which will be mobile, mounted on a platform raft in the river, and adjusted according to wind direction. This approach is acceptable, however, CPG should consider having additional equipment on hand to set up a second land-based upwind location if multi-directional winds are experienced (and potentially indicative of separate off-site air emission sources) that should be accounted for in the program. Alternately, it may be more practical /efficient to have two stationary UW locations along the opposite riverbank, if accessible and secure locations can be managed.</p> <p><b>Response: The geometry of the removal site and the fact that the northern/western riverbank is not secure and not accessible especially at low tides poses problems for locating upwind monitoring locations.</b></p>

5	Section 3.1.2, Downwind Locations	<p>This section and Figure 1 describe the proposed downwind monitoring approach, which includes one downwind mobile station, DW mobile #1, and two downwind stationary locations (generally fixed in place for most of project), designated as either DW #1 and #2 for the upper-half of TCRA area, or DW#2 and DW#3, for the lower-half. The stationary locations are spaced approximately 1000 ft apart. However, the current configuration is considered too widely spaced and potentially not fully effective for monitoring the relatively small –scale operation on the river. Instead, a revised approach using triangulation is recommended:</p> <ul style="list-style-type: none"> <li>- Upwind (UW) mobile location is immediately upwind and outside of influence of the dredge/barge operation, as currently proposed.</li> <li>- Downwind (DW) mobile location is immediately downwind of the dredging operation based on prevailing winds, as currently proposed, and adjusted daily and throughout the day, if needed.</li> <li>- Fixed DW #1 and # 2 are placed approximately equidistant on either side of the DW mobile unit, appropriately spaced to capture dredging operation emissions, to address expected fluctuations in wind direction.</li> </ul> <p>DW#3 should be utilized to monitor at the closest receptor, by moving along the eastern park boundary, located daily according to daily wind direction and the closest occupied building(s) outside of the park. This should generally be placed in line downwind from the UW location and immediate downwind mobile unit.</p> <p><b>Response: There are only two fixed downwind locations at a time. DW#3 only occurs after DW#1 is no longer needed (i.e. it is the same piece of equipment). There are essentially three areas of dredging: the northern area (finger), the area just upstream of the ‘no dredge zone’ and the area downstream of the ‘no dredge zone’. Two fixed air monitoring stations will be positioned to best capture downwind air during the dredging of each of these three areas. The mobile unit will be moved around to best supplement the two fixed stations.</b></p>
6		<p>The plan should describe the expected height of the monitoring stations and reason for same (receptor-based). Consideration should be given to RM 10.9 landscape features on both sides of the river and the potential impacts on expected wind and emission movement during the summer months.</p> <p><b>Response: The Perimeter Air Monitoring Program (PAMP) prescribes appropriate management measures and monitoring that protect the public living and working adjacent to the RM 10.9 Removal Area from potential airborne contaminants. Therefore, the air monitoring locations will be at the height of the breathing zone above the ground to capture potential impacts.</b></p>

7	Section 3.3, COPCs Particulate Monitoring	<p>CPG proposes a rotating COPC monitoring schedule. However, this approach will not meet the needs of this project. Instead, the following monitoring schedule is recommended:</p> <ul style="list-style-type: none"> <li>- For the first 2 weeks of monitoring (6 days per week, 12 days total) collect 24-hr samples for all COPCs</li> <li>- Based on review of this information (via expedited laboratory timeframes, as already proposed) in comparison to pre-dredging ambient COPC data and health based warning and action levels, reductions in frequency and type of COPC monitoring may be considered if justified by the monitoring data and upon review and approval of USEPA and NJDEP.</li> </ul> <p><b>Response: The CPG finds the Department's suggestion excessive when all of the calculations previously provided to and reviewed by the Department show potential air emissions at levels that are orders of magnitude below NJDEP permitting thresholds. In addition the RM 10.9 sediment is orders of magnitude less contaminated than the Phase 1 sediment removal and it is the CPG's understanding that no action levels were exceeded during that project. The Department's recommended approach will require an additional 4 Andersen PUF air samplers since each sampler can only collect enough particulates for one analysis per 24-hour composite, be it dioxin or PCBs or mercury, but not any combination of these per sample. This is the reason the CPG went to a rotating analysis scheme. The CPG respectfully disagrees with the Department's recommendation.</b></p>
8	Section 3.4, Barge Transport Monitoring	<p>CPG proposes monitoring for total VOC emissions and Total particulates as the first barge of dredged material moves downriver to the off-loading destination. This would be performed by having a mobile air monitoring unit move along-side the barge, between the barge and closest shoreline receptors. The logistics of monitoring in the correct location given the moving barge and affected wind is considered difficult. Therefore, instead, it is recommended that worst-case monitoring be performed with a barge-mounted unit on the downwind section of the barge, to include analysis for COPCs. If neither warning nor action levels are exceeded, further barge transportation monitoring is not necessary, provided the barge loads are comprised of sediment expected to be similar (or less contaminated) for the duration of the project. Using tarp-covered barges provides an extra measure of emission control and should be considered.</p> <p><b>Response: The sediment in the barge will be wet during transport and covered by water. The potential for anything to emit at or near levels of concern from a water-covered sediment is almost non-existent. Moreover, performing monitoring during transportation is a difficult to implement task, one that given the documented low potential for any emissions, appears unreasonable to require. Instead, the CPG proposes to perform the initial air monitoring of barge emissions by setting up a real-time monitor alongside the barge while it is stationary at the downwind side before it begins the first trip down river and only for the first barge filled.</b></p>

9	Section 3.5, Baseline Monitoring	<p>Prior to dredging operations, the CPG proposes a program of “48- hours of monitoring”, to be collected and analyzed for PCBs and Dioxins/Furans. Clarification needed on whether this will result in two sets of 24-hr samples, or 1 set of 48-hr samples. The baseline monitoring should match the exact sampling methods (i.e., time/duration) of samples collected during the dredging and capping operations, therefore 24-hr samples are preferred.</p> <p><b><i>Response: The 48-hours of monitoring will generate two 24-hour composites.</i></b></p>
10	Section 3.6, Monitoring Frequency and Durations	<p>Adjust this table per comments in 4-7 above.</p> <p><b><i>Response: Once approval is provided for the air monitoring plan this table will be adjusted.</i></b></p>
11	Section 3.7.3, Exposure Point Concentrations	<p>It is agreed that Phase I Removal Area ambient COPC data provides an indication of potential ambient COPC conditions, however, due to the distance from and different features (nearby sources, etc.) between the Phase I Removal area and RM 10.9, site-specific baseline COPC data, per Section 3.5 will have greater bearing on this project. Therefore, site- specific baseline and ongoing data, once available, will be used for evaluation of monitoring data relative to the designated warning and action levels for this project.</p> <p><b><i>Response: Noted</i></b></p>
12	Table A-4 and Section 3.7.4, Development of Project-Specific Risk Based Action Levels	<p>Initial review of this section has been completed. Appropriate methods and chemical toxicity information for the key COPCs have been used to derive the project-specific risk based action levels. Evaluation of the exposure parameters is still underway and NJDEP may provide additional comments on this aspect of action level development. However, in the interim, two items: a. CPG should briefly describe why toxicity information for Aroclor 1254 was chosen to derive the Total PCB action level (most prevalent, best information, etc.) and b. it is noted that exposure time (ET) in these calculations are: 8 hrs/day for 90 days for a Park Worker, 12 hrs/day for 90 days for a resident and, 3 hrs/day for 90 days for a recreational user. Although dredging will occur over a 12 hr/day time period, the ET for a residential action level should be 24 hrs instead of 12 hours, since the resident may be present in their home for 24 hours and emissions may continue to off-gas from the dredging area during non-dredging time periods.</p> <p><b><i>Response: The CPG believes it is unreasonable to assume that the sediment will continue to off-gas during non-dredging periods. The potential to emit calculations show that parameters that may off-gas (VOCs, SVOCs) are many orders of magnitude below accepted levels of concern. In addition at least 50 percent of the time the dredge area will be underwater and therefore if there was an off-gas potential it will be subdued due to the overlying water. A large portion of the removal area is exposed twice a day during low-tides, and there is no indication of off-gassing of any COPC. The CPG believes that it is unwarranted to calculate residential exposure over a 24-hour period, but will redo the calculations assuming 24-hour exposure time.</i></b></p>

13	Section 4.1, Real-Time Monitoring Table 4-1	<p>Citations/references for the action and warning levels proposed by the CPG must be presented, along with a brief description as to why these are appropriate for this project. For Hydrogen Sulfide, the CPG lists an Action level of 1 ppm and a warning level of 100 ppb, without necessary citations. The odor threshold for H<sub>2</sub>S is 0.08 – 0.12 ug/m<sup>3</sup>. For comparison, an action level of 28 ug/m<sup>3</sup> (0.02 ppm) (ATSDR, Minimal Risk Level, MRL, 12/2010) for intermediate duration exposure (15 to 365 days) was selected for the Phase I Removal project at RM 3.2 in 2012. No exceedance of this action level was observed. The Hudson River Project utilized 0.01 ppm (1 hr. average). Therefore, justification/revision of the H<sub>2</sub>S action level is recommended.</p> <p><b>Response: Based on the characterization data for the Removal Area, the likelihood of hydrogen sulfide emissions is low, therefore the action level was set at a level just above the odor threshold but below a health concern level. The hydrogen sulfide action level will be decreased from 1 ppm to 0.02 ppm and a warning level decreased from 0.1 ppm to 0.01 ppm.</b></p>
14	Section 4.2, Particulate Monitoring Warning and Action Levels	<p>This section states that “...these action levels should be viewed as the average target concentrations to be maintained”. Clarification needed on the time frame involved for designated averages for the various parameters to be monitored - -, 15 minutes, 1 hour, 1 day, 1 week, etc. Note that this may be different for VOCs, dusts, COPCs, etc. It is recommended that weekly COPC averages be computed, in addition to the daily composite samples, which essentially provide a daily average for each day monitored.</p> <p><b>Response: Section 4.2 is for particulate monitoring for COPCs only, which is a 24-hour composite sample, therefore the timeframe involved is 24-hours. Due to the alternating COPC sampling scheme, a weekly average would only consist of two samples per COPC if using a 7-day rolling average.</b></p>
15		<p>Laboratory validated COPC data are to be summarized in relation to background data and warning and action levels and reported to NJDEP and USEPA on a weekly basis to the extent possible, given laboratory analysis turnaround timeframes.</p> <p><b>Response: The CPG will adhere to Section 29.a of the Administrative Order on Consent (dated June 18,2012) which requires that the CPG provide all data received during the reporting period to USEPA as part of the monthly progress report (The Department is copied on this report). When practicable, the CPG will provide laboratory validated data available to the USEPA as it becomes available.</b></p>